

# Policy Brief

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## The role of digital health platforms in re-skilling healthcare professionals in developing countries: The case of MedicineAfrica



### EXECUTIVE SUMMARY

There is limited understanding about how digital health platforms can establish and develop professionalism in developing countries, especially where continuous professional development opportunities are scarce or under-developed. Our research illustrates how this can be achieved by drawing on a qualitative study of a non-profit platform, MedicineAfrica, that is dedicated to delivering free online health education in post-conflict countries. We identify four mechanisms through which platforms can help to enhance professionalism: standardisation of clinical practice; 'normalisation' of professional behaviour; development of medical knowledge; and instilling of values. We then discuss the bureaucratic process that underpins platform-led professionalisation and its potential colonising effects. The research offers a set of recommendations about how digital health platforms can enhance national health services in terms of building capacity and creating social value for the community.

### Key findings

Our analysis points to four mechanisms that enable digital platforms to establish medical professionalism in settings where this is under-developed:

- standardisation of clinical practice
- 'normalisation' of professional behaviour
- development of medical expertise
- instilling of values

This Policy Brief presents a selection of interview quotes that illustrate these four mechanisms.

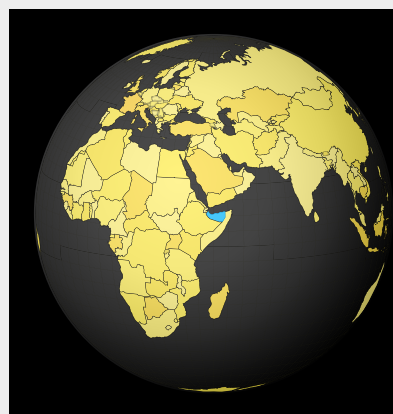
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### Standardisation of clinical practice

Interviewees reported how MedicineAfrica helps them overcome Somaliland's major problems, which is the highly idiosyncratic and individualistic manner with which medical conditions are being treated as a result of the lack of clinical protocols. Historically, the establishment of standards has been valuable for the institutionalisation of professional bodies. In developed national healthcare services, standards have been considered the holy grail as they have been associated with better health outcomes and quality of care. Although their implementation is highly problematic and variations seem to be inevitable, in the case of Somaliland, diversity of clinical practice was viewed as a significant problem of the health service. Exposure to British clinical standards was seen as a way that can help to overcome such diversity:

*"The problem is that there are no guidelines to treat, for example, pneumonia. So, one doctor might give a drug and another doctor may see that another drug is way better than the first one... and will just change the treatment".*

*"MedicineAfrica really helped us to overcome such diversities".*

### 'Normalisation' of professional behaviour

The second mechanism was 'normalisation' of medical professionals' behaviour, especially during doctor-patient interactions. Interviewees reported how doctors lack communication skills that are vital when they need to break the news to patients and/or their families (e.g., in the case of the diagnosis of a terminal illness). This largely comes from a tradition whereby doctors pay almost unidirectional attention to the medical side of consultation, overlooking the social side of it.

*"They do have bad communication with the patients, and they don't know how to care for the patient. Mostly, they rush in to give the patient a treatment or a drug, and they think that giving a patient a drug is very important, rather than consulting the patient, 'cooling' the patient, or calming their emotion".*

### Development of medical expertise

MedicineAfrica provides medical students and healthcare workers with an opportunity to enhance their medical expertise. Post-conflict countries tend to have significant gaps in medical specialisations and MedicineAfrica addresses this gap by offering the expertise that is missing. Consequently, medical students are much better equipped to understand, diagnose and treat conditions. The example below demonstrates how medical students strengthened their knowledge and improved their ability to make accurate diagnoses. Comparisons between current doctors' limited or outdated knowledge and students' in-depth expertise gained through the platform were frequently made.

*"One of the challenges ..is that most of the doctors are not up to date... For example, we get a lot of information from MedicineAfrica about hypertension. So, when you go to the ward and you tell the doctor that some patient needs to be monitored because their blood pressure is not stable, the thing they will be asking you about is whether she is hypertensive? And you say no, and they will not take that into consideration. She's not hypertensive. Okay, there's no problem. Then you tell them the heart blood pressure has risen from this to this and that's a bit concerning [...] So, there is a discrepancy between what you have learnt and what you actually see in the ward and the rotations".*

### Instilling of Values

Through MedicineAfrica, medical students are being presented with various approaches that other national healthcare services are taking to treat medical conditions. Comparisons between what their system values and practises, and what other systems do offers rich learning opportunities. At the same time, the voluntary work that UK-based tutors offer to the platform encourages students to consider offering their expertise they have acquired to others that might be lacking it. Wider societal benefits might thus emerge.

*"I have understood much, much bigger concepts from MedicineAfrica because in Hargeisa, you see patients dying and you don't really think that's a big deal, but when you see what other countries are doing, you really understand that something must be addressed..."*

The identification of the four mechanisms presented above begins to explain how platforms institutionalise professionalism in under-developed healthcare settings, which, as we have seen with our study, is achieved through a process of bureaucratisation. The platform 'develops' professionals through bureaucratic mechanisms including clinical protocols, normalisation of professional behaviour and values, and the transfer of clinical expertise. This is a paradoxical effect in as long as platforms constitute a departure from, and an alternative to, traditional organisational structures. What is more, our findings raise questions regarding the potential - largely unnoticed and unintended - colonising effects such professional institutionalisation might engender.

*"I think it's important where they [tutors] are coming from because people relate to people that they can relate to. And if, for example, a UK guy comes and he says we've done this for 100 years and this system works, I think my people, to be really honest with you, they would say you are white, we're black"*

## Recommendations

Our findings from this study are important for the directors of platforms such as MedicineAfrica - with a global outreach and a focus on knowledge transfer - and for health policymakers.

**Our recommendations for the directors of platforms are presented in three categories:**

- 1. Accessibility of content and blended delivery mode:** The platform could consider offering content in the local language spoken by platform participants; in this case, Somali. Our findings point to (varied) language-related challenges that medical students and healthcare workers encountered. Recruiting instructors who have experience from both contexts (in this case, the UK and Somaliland) would therefore be helpful. Participants reported issues of connectivity to the platform as a result of unstable Internet. The option for a low-bandwidth, text-based version, which MedicineAfrica had previously adopted, was not perceived as an ideal solution as it reduces engagement. Given that some modules (e.g., radiology) would benefit from face-to-face teaching too, we also recommend that blended delivery modes could be the way forward, combining the strengths of both online and face-to-face teaching.
- 2. Acknowledging diversity:** Cultural variations need to be embraced and incorporated in modules' content. Research participants identified important differences between the two national health services (UK and Somaliland) in terms of their clinical processes, health infrastructure, as well as their underpinning values. Content needs to maintain local relevance (reflecting local resources and capacity), respecting local values and tradition, whilst also incorporating western best practices. Therefore, we discourage a 'copy-paste' approach and instead recommend that equilibrium should be attained between what is desirable (from both parties involved) and what is feasible.
- 3. Capacity building potential:** Participants embraced the prospect of getting know-how and best practice transferred across to Somaliland so that they can build their own courses locally and develop local expertise across the country. In line with earlier work we have done with MedicineAfrica, for digital platforms to truly create social value, they need to not only allow, but also empower their members to be active, assume responsibilities on the platform, and 'go the extra mile'. This would, in turn, enable them to gain the skills that are necessary in order to create high-quality local systems and practices that serve local populations.

**Our recommendations for health policy makers are the following:**

- 1. Digital health platforms can enhance health professionalism** as they facilitate the transfer of clinical expertise and offer opportunities for re-skilling.
- 2. Incentives need to be offered** to the people who contribute to not-for-profit platforms, offering their time, expertise and working voluntarily.
- 3. Digital health platforms constitute an important tool** to address global health inequality in terms of clinical know-how and expertise between developed and developing countries.

## REFERENCES

**Chamakiotis, P., Petrakaki, D. and Panteli, N.** (2021). Social value creation through digital activism in an online health community. *Information Systems Journal*, 31(1), pp. 94-119.

**Petrakaki, D., Chamakiotis, P. and Bamber, J.R.** (2021). Establishing professionalism through digital health platforms. In: *Proceedings of the UK Academy of Information Systems (UKAIS 2021) Annual Conference: 'Navigating the 'new normal' — Information Systems for a post-pandemic world'*, March 23-24, online.

## PROJECT INFORMATION

This brief presents results from 30 semi-structured interviews with medical students who participated in online modules offered by MedicineAfrica. The study was conducted between 2019-2021 by Dr Dimitra Petrakaki at the University of Sussex and Dr Petros Chamakiotis at ESCP Business School with the support of funding from The British Academy / The Leverhulme Trust (grant number SRG19\191207). Both researchers are affiliated with the ESRC-funded Digital Futures at Work Research Centre as a Co-Investigator and an Associate Fellow respectively. Mr Jonathan R. Bamber was involved in data collection.

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